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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Application Number: 10/722,651
Filing Date: November 26, 2003
Appellant(s): KHAN ALICHERRY ET AL.

David E. Shifren
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 23rd day of January 2009 appealing from the Office action

mailed 17th day of July, 2008.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is incorrect. A correct statement of the status of the claims is as follows:

This appeal involves claims 1-7, 9, 14-21, 23-24, and 26-29.

Claims 8, 11, 22, and 25 are allowed.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is substantially correct. The changes are as follows:

WITHDRAWN REJECTIONS

The following grounds of rejection are not presented for review on appeal because they have been withdrawn by the examiner.

The 35 U.S.C. § 101 rejection of claims 1-29 has been withdrawn in view of the John J. Love memorandum dated May 15, 2008, titled "Clarification of 'Processes' under 35 U.S.C. § 101".

The 35 U.S.C. § 102(e) rejection of claim 29 has been withdrawn in view of a minor clerical mistyping of the claim numbering. As Appellants have properly pointed out, claim 29 was not rejected under an art rejection.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

US 2004/0061701   Arquie   04-2004

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claims 1-7, 9, 14-21, 23-24, 26-28 are rejected under 35 U.S.C. 102(e) as being anticipated by Arquie **(US 20040061701)**.

(Claim language that is *italicized* has been interpreted as being drawn to intended use and is not given patentable weight. Such formatting is merely exemplary and not exhaustive. See MPEP 2111.04 and Claim Interpretation section above.)

Arquie discloses: 1. A method of designing a line system, the method comprising the steps of:

obtaining a set of one or more demands *for use in computing the line system design*, wherein <u>the one or more demands comprise one or more bandwidth requests **(para 38)**</u>; and

representing the line system design as a graph in accordance with a graph coloring operation wherein colors represent bandwidths such that bandwidths are assigned and the one or more demands are routed *so as to attempt to achieve a minimum total design cost*; specifying a lien system design based on the assigned bandwidths and the routed demands **(para 13 "adding color [] such that particular performance ranges are essentially color-coded.")**.

Arquie discloses: 2. The method of claim 1, wherein colors are partitioned in sets and the sets are ordered so that colors in higher sets cost more than colors in lower sets **(para 13 "adding color [] such that particular performance ranges are essentially color-coded.")**.

Arquie discloses: 3. The method of claim 2, wherein a link of the graph represents a location of a

component of the line system being designed **(Fig 6, 7 and description)**.

Arquie discloses: 4. The method of claim 3, wherein the cost of a link in a coloring is equal to the cost of the most expensive set such that a demand going through the link is colored with a color in the most expensive set **(para 57 -"The selected "device" for such monitoring can simply be the one with a selected amount of traffic (such as "show me the highest (lowest or other ranking) device and contributors").")**.

Arquie discloses: 5. The method of claim 3, further wherein colors are assigned to the demands such that no two demands routed on the same link of the graph are assigned the same color **(para 53, 57)**.

Arquie discloses: 6. The method of claim 1, wherein the line system being designed is a linear line system **(para 12, Fig 4 exemplary item 435/434 and description)**.

Arquie discloses: 7. The method of claim 6, further comprising the step of representing the line system design by an interval graph **(Fig 4, 5, 6, 7 and descriptions)**.

Arquie discloses: 9. The method of claim 1, further comprising the step of polynomially computing the graph coloring operation **(Fig 7 - Legend)**.

Arquie discloses: 14. The method of claim 1, wherein the line system being designed is an optical line system **(para 27 "includes connection infrastructure that is usually standards-based, such as based on the Fibre Channel standard, and includes optical fiber")**.

(10) Response to Argument

10.1 **Background:**

10.1.1 Claims 1-29 were rejected under 35 U.S.C. § 101 as being drawn to non-statutory subject matter.

10.2 **Appellants argue:**

10.2.1 Appellants' arguments address the claim, citing *In re Bilski*.

10.3 **Examiner Response:**

10.3.1 Appellants' arguments have been fully considered but are moot in view of the John J. Love memorandum dated May 15, 2008, titled "Clarification of 'Processes' under 35 U.S.C. § 101".

10.4   **Background:**

10.4.1   Claims 1-7, 9, 14-21, 23-24, 26-28 stand rejected under 35 U.S.C. 102(e) as being anticipated by

Arquie (US 20040061701).

10.4.2   Certain features of the claimed invention were, in view of the MPEP, not given patentable weight.

10.5   **Appellants argue:**

10.5.1   "The Examiner characterizes the limitations of claim 1 which recite (emphasis in original)

"obtaining a set of one or more demands *for use in computing the line system design,*" and

"representing the line system design as a graph in accordance with a graph coloring operation

wherein.., the one or more demands are routed *so as to attempt to achieve a minimum total*

design cost," as being drawn to intended use and hence not given patentable weight." (Brief:

page 12, first paragraph)

10.5.2   "These limitations directed to "obtaining a set of one or more demands *for use in computing the*

line system design," and "representing the line system design as a graph in accordance with a

graph coloring operation wherein.., the one or more demands are routed *so as to attempt to*

achieve a minimum total design cost," recite parts of the process itself rather than simple

expressions of intended results of process steps. Accordingly, these claims should be afforded

patentable weight. Moreover, these clauses state conditions that are material to patentability."

(Brief: page 12, paragraph 5)

10.5.3   "In this case, Appellants assert that Arquie clearly fails to teach or even suggest each and every

limitation of the claims. For example, Arquie does not disclose the limitation recited in claim 1

directed to representing a line system design as a graph in accordance with a graph coloring

operation wherein colors represent bandwidths such that bandwidths are assigned and the one

or more demands are routed so as to attempt to achieve a minimum total design cost.

10.5.4   The final Office Action cites paragraph [0013] of Arquie for the purpose of suggesting that

"adding color [] such that particular performance ranges are essentially color-coded" teaches this

claim limitation. However, this portion of Arquie completely fails to teach, or even suggest, the

claim limitation at issue. That is, Arquie mentions nothing about colors representing bandwidths

such that bandwidths are assigned and the one or more demands are routed so as to attempt to.

achieve a minimum total design cost." (Brief: page 13)

10.6   **Examiner Response:**

10.6.1 Regarding subsection 1 *supra*, as explained previously in Advisory Action dated 10/06/2008,

(page 3 third paragraph from the bottom), patentable weight was not given to the limitations of

"for use in..." and "so as to achieve...". Specifically, the "for use" limitation is drawn to intended

use and non-functional descriptive matter. It does not necessitate that the feature is used in a

computing system, but merely suggests its use in said system through the non-limiting language.

In view of MPEP 2111.04, anything that is made optional, but does not necessitate function or

structure does not limit the claim, and as such, is not given patentable weight. This case is

exemplified by element (A) in MPEP 2111.04, which recites analogous language "adapted for".

Something may be "adapted for" performing a function, but that does not necessitate such a

function to be performed in the same context. As such, in view of the MPEP, patentable weight

was not afforded to this limitation. The claim feature of "so as to achieve' was also not given

patentable weight for the same reasons, due to lack of positive language that necessitates

function or structure.

10.6.2 Regarding subsection 2 *supra*, Appellants statement is conclusionary and does not recite how the

intended use / non-functional language further limits the claim.

10.6.3 Regarding subsection 3 *supra*, nevertheless, even if patentable weight was afforded to the non-

limiting claim language, the features are taught by the reference. The line system is an inherent

feature in the display of the network environment as there are nodes which contain lines

(connections) between the nodes, this is displayed as the graph in Fig 4 wherein the connections

(e.g. lines, elements 435 and 434) serve as the lines in the system design. It must be noted

however, that the claimed "graph" is not the same graph in the sense of bar-graph or a chart (for

example, see Fig 1 of the Instant Application's Drawings).

Furthermore, the limitation of assigning colors representing bandwidths are disclosed by Arquie

(PGPUB para 0013), partially recited below:

> "In other embodiments, the determined performance parameter is further illustrated in the display by **adding color to the "moving" display** such that particular **performance ranges are essentially color-coded**. In some embodiments, the **color-coding is used in place of the use of the speed** of display movement to indicate status of a performance parameter. In yet other cases, line or dash length is used in combination with color and/or element movement speed to further clarify the display. For example, **smaller dashes (or higher dash density) can be used to indicate a connection path is being more highly utilized**. Lower utilization (or another parameter) would in contrast be shown with longer lines or dashes (or lower dash density)." (emphasis added by Examiner)

The minimization of costs is implied in PGPUB paragraph 0060 of the reference, which states:

"For example, the use of utilization rate as the displayed performance information for connections was

selected because it allows network administrators to rapidly and effectively <u>identify which connections (or</u>

<u>switches or other components) are being saturated or over utilized or are being underutilized</u>." (emphasis

by Examiner

10.7   **Appellants argue:**

10.7.1 "The final Office Action cites paragraph [0013] of Arquie for the purpose of suggesting that

"adding color [] such that particular performance ranges are essentially color-coded" teaches or

suggests this claim limitation. Appellants respectfully submit that Arquie does not describe

partitioning colors into sets. Rather, Arquie describes an arrangement in which "a different color

is assigned to each of the performance ranges." See Arquie at paragraph [0052]; see also Arquie

at paragraphs [0013] and [0016], as well as claims 13 and 20." (Remarks: page 13 bottom)

10.8   **Examiner Response:**

10.8.1 PGPUB para 0013 recites, in part:

> "In some embodiments, the color-coding is used in place of the use of the speed of display movement to indicate status of a performance parameter. In yet other cases, line or dash length is used in combination with color and/or element movement speed to further clarify the display. For example, smaller dashes (or higher dash density) can be used to indicate a connection path is being more highly utilized. Lower utilization (or another parameter) would in contrast be shown with longer lines or dashes (or lower dash density)." (emphasis added)

The performance ranges correlate to the higher / lower utilization of bandwidth. Meaning, higher is performing at higher range, and lower is lower range.

10.8.2 **Appellants argue:**

10.8.2.1   "Dependent claims 5 and 19 are patentable at least by virtue of their respective
dependencies from claims 1 and 2 and from claims 15 and 16. Moreover, these claims define
additional separately patentable subject matter. Specifically, claims 5 and 19 include
limitations wherein colors are assigned to the demands such that no two demands routed on
the same link of the graph are assigned the same color.

10.8.2.2   The final Office Action claims that these limitations are taught by Arquie at paragraphs
[0053] and [0057]. Appellants respectfully submit that the relied-upon portions of Arquie
contain no teaching or suggestion related to assignment of colors to demands, much less
doing so such that no two demands routed on the same link of the graph are assigned the
same color." (Remarks: page 14, middle)

10.8.3 **Examiner Response:**

10.8.3.1   Attention is drawn to, for example, Fig 4, item 435 and 434 which demonstrate that the
utilization of bandwidth in 434 is non-existent within that link, but indeed exists within 435.
Therefore, this shows a link such that the two demands (equivalent to the bandwidth) are
not the same color / arrow (which is a functional equivalent thereof, as can be used
interchangeably - PGPUB para 0013: "In yet other cases, line or dash length is used in
combination with color and/or element movement speed to further clarify the display.").

10.9   Claims not specifically mentioned are argued under same rationale as recited above. To not
belabor the point, attention is respectfully drawn to the traversals above for the respective
arguments.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

/David Silver/   4/21/2009

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